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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,947	06/25/2003	W. Perry Dowst	65841-017 (WMST-003)	3128
7590	03/03/2004			
David M. Mello McDermott, Will & Emery 28 State Street Boston, MA 02109			EXAMINER PRICE, CARL D	
			ART UNIT 3749	PAPER NUMBER

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/603,947

Applicant(s)

DOWST ET AL.

Examiner

CARL D. PRICE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 42-96 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 42-96 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09-26-03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claims

Claims 1-41 have been cancelled by the applicant in the amendment filed on 09-15-2003.

New claims 42-96 were added in the amendment filed on 09-26-2003.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper."

Therefore, **unless** the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

The disclosure is objected to because of the following informalities: On page 10, line 11, the term "(CAN'T FIND ON IFGURE)" should be deleted.

Appropriate correction is required.

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Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: On page 10, line 11, the reference numeral "406". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 42-52,59-71,74-82,85: rejected under 35 U.S.C. 103(a)

Claims 42-52,59-71,74-82 and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gurth (German 373125) in view of Fu et al (U.S. Patent No.- 5564589).

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In regard to claim 65, the recitation "for transferring heat to a vessel" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In regard to claim 65, 66 and 74, the recitations 1) "for transferring heat to a vessel" and "configured to thermally couple to and extend from, the vessel" (claim 65), 2) "configured to permanently couple to the vessel" (claim 66), and 3) for receiving heat output from the burner head" (claim 74), are deemed recitations of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963)

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Gurth (German 373125) shows a heating vessel (G) with a heater (B) for heating a substance, the heater (B) having a heat source including a burner head (6) and a port for coupling to a fuel supply system, the heating vessel comprising:

A. a vessel (G) having enclosed sides, a thermally conductive bottom end and a top end forming an opening (not shown) for the introduction and extraction of the substance, the bottom end having an external bottom surface having a central area (3); and

B. a series of thermally conductive protrusions (O) coupled to the vessel peripherally about the central area, the protrusions extending from the vessel and defining with the central area a cavity configured for receiving heat output from the burner head. The protrusions are substantially oriented in at least one ring disposed about the burner head, and to minimize, at least to some degree, radial obstruction of the flow of combustion gases from the burner head. And, the protrusions comprise a series of undulations in at least one piece of thermally conductive material, wherein the undulations are comprised of a set of segments. Gurth shows a base (S) configured to substantially encase the heat source. Gurth however does not show the protrusions "coupled" to the vessel.

Fu et al, teach, form the same heating vessel field of endeavor as Gurth, coupling a series of thermally conductive protrusions (2,3) to a vessel peripherally about a central area (see figure 3), protrusions radially extend beyond the external bottom surface and transverse portions of the sides of the vessel and defining with the central area a cavity configured for receiving heat output from a burner head. Fu et al includes a skirt (7)

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configured to peripherally encase the protrusions, the skirt having a series of exhaust vents (6) formed therein.

In regard to claims 42-52, 59-71, 74-82 and 85, for the purpose of increasing the thermal conductivity between the protrusions and the vessel wall, it would have been obvious to a person having ordinary skill in the art to "couple" the protrusions of Gurth thereto, to extend beyond the bottom periphery, and to include a multiple-walled vessel, in view of the teaching of Fu et al. In regard to claims 49, 52, 61, 62, 66-69, 75 and 76, since shape of the protrusions (e.g. - pins), the manner of coupling (e.g. -soldering, brazing, gluing, etc.), the height of the vessel, length of the protrusions, aspect ratio of the protrusions, etc. would depend on numerous design concerns such as the overall size and shape of both the burner and vessel, the type of substance being heat, the amount of heat intended to be transferred to the substance through the vessel wall, etc., to configure the protrusions to have an aspect ratio of at least about 5, or an aspect ratio between about 10 and 20, and a vessel height of H and wherein a portion of the vessel sides traversed by said protrusions is less than about 1/4 of said vessel height H, can be viewed as nothing more than merely a matter of choice in design absent the showing of any new or unexpected results produced therefrom over the prior art of record. In regard to claim 85, Official Notice is taken that it is well known to provide vessels with handles. Thus, in view of that which is well known, it would have been obvious to a person having ordinary skill in the art to provide the Gurth vessel with a handle. In regard to claim 43, 44 and 45, Official Notice is taken that it is well known to provide heated vessels with removable covers, and to surround heated vessels thermal insulation, for limiting the

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amount of heat lost through the otherwise open top vessel and exposed exterior vessel walls. Thus, in view of that which is well known, it would have been obvious to a person having ordinary skill in the art to provide Gurth with a cover and surrounding thermal insulation.

Claims 53-58,72,73,83,84 and 86-96, are rejected under 35 U.S.C. 103(a)

Claims 53-58,72,73,83,84 and 86-96, are rejected under 35 U.S.C. 103(a) as being unpatentable over Gurth (German 373125) in view of Fu et al (U.S. Patent No.- 5564589), as applied to claims 42,65 and 74 above, and further in view of Kells et al (U.S. Patent No.- 2595527) and Goerl (U.S. Patent No.-2154305).

Gurth (German 373125) shows a heating vessel (G) with a heater (B) for heating a substance, the heater (B) having a heat source including a burner head (6) and a port for coupling to a fuel supply system, the heating vessel comprising:

A. a vessel (G) having enclosed sides, a thermally conductive bottom end and a top end forming an opening (not shown) for the introduction and extraction of the substance, the bottom end having an external bottom surface having a central area (3); and

B. a series of thermally conductive protrusions (O) coupled to the vessel peripherally about the central area, the protrusions extending from the vessel and defining with the central area a cavity configured for receiving heat output from the burner

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head. The protrusions are substantially oriented in at least one ring disposed about the burner head, and to minimize, at least to some degree, radial obstruction of the flow of combustion gases from the burner head. And, the protrusions comprise a series of undulations in at least one piece of thermally conductive material, wherein the undulations are comprised of a set of segments. Gurth shows a base (S) configured to substantially encase the heat source. Gurth however does not show a skirt configured to peripherally encase the protrusions, the skirt having a series of exhaust vents formed therein; and a base configured to substantially encase the heat source, the base having a set of air inlet vents formed therein, wherein a gas flow path is formed from the air inlet vents to the exhaust vents via the burner head. Or, a baffle plate disposed below the heat outlet and forming part of said gas flow path, the baffle plate having one or more air vents formed therein configured to deliver a predetermined amount of air received from the air inlet vents to the heat outlet.

Kells et al teaches, from the same vessel heating field of endeavor as Gurth, providing a vessel with a thermally insulated skirt (14) configured to peripherally encase the protrusions, the skirt having an exhaust vent formed therein and a baffle plate (51) disposed below the heat outlet (45) and forming part of said gas flow path, the baffle plate having an air vent formed therein configured to deliver a predetermined amount of air to the heat outlet.

Goerl teaches, from the same vessel heating field of endeavor as Gurth, providing a skirt (16,17) configured to peripherally encase the protrusions, the skirt having a series of exhaust vents (54) formed therein; and a base (17) configured to substantially encase

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the heat source, the base having a set of air inlet vents (56) formed therein, wherein a gas flow path is formed from the air inlet. The skirt is separable from the base and the base is storable within the vessel.

In regard to 53-58,72,73,83,84 and 86-96, for the purpose of limiting the flow of heat over the bottom of the vessel and protrusions, it would have been obvious to a person having ordinary skill in the art to modify the base of Gurth to include a baffle, in view of the teaching of Kells et al. Also, for the purpose of for the purpose of limiting the flow of heat over the bottom of the vessel and protrusions, it would have been obvious to a person having ordinary skill in the art to modify the base of Gurth to include a skirt configured to peripherally encase the protrusions, the skirt having a series of exhaust vents formed therein; and a base configured to substantially encase the heat source, the base having a set of air inlet vents formed therein, wherein a gas flow path is formed from the air inlet, in view of the teaching of Goerl. In regard to claims 86-96, since shape of the protrusions (e.g. - pins), the manner of coupling (e.g. -soldering, brazing, gluing, etc.), the height of the vessel, length of the protrusions, aspect ratio of the protrusions, etc. would depend on numerous design concerns such as the overall size and shape of both the burner and vessel, the type of substance being heat, the amount of heat intended to be transferred to the substance through the vessel wall, etc., to configure the protrusions to have an aspect ratio of at least about 5, or an aspect ratio between about 10 and 20, and a vessel height of H and wherein a portion of the vessel sides traversed by said protrusions is less than about 1/4 of said vessel height H, can be viewed as nothing

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more than merely a matter of choice in design absent the showing of any new or unexpected results produced therefrom over the prior art of record.

Conclusion

See the attached PTO FORM for prior art made of record that is not relied upon, which is considered pertinent to applicant's disclosure.

USPTO CUSTOMER CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Carl D. Price** whose telephone number is **(703) 308-1953**. The examiner can normally be reached on Monday through Friday, between the hours of **6:30 am** and **3:30 pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Ira Lazarus** can be reached on **(703) 308-1935**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Carl D. Price', with a stylized flourish extending to the right.

Carl D. Price
Primary Examiner
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cp